Kindergarten Classroom Website: A Usability Study of a Teacher Website

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Abstract: Communication between a teacher and families is critical for a positive learning environment. Various forms of communication between the teacher and families can encourage parent participation as well as foster the growth of existing relationships. It is important for parents to have access to important school and classroom information in one convenient location. The current school website has limited features and design capabilities for teachers to provide information to parents.

To address this need, a teacher-created classroom website was created. The purpose of this usability study was to develop and evaluate the ease-of-use and navigation of a *Kindergarten Classroom Website: A Usability Study of a Teacher Website* (https://kinderclasswebsite.weebly.com) designed to provide parents with one convenient location to find all important and necessary school and classroom information. The website was created using Weebly, a cloud-based web development platform. The design of the website used Gestalt's Principles with components from Rosena and Purinton to focus on the cognitive parts of the design. Three rounds of usability testing were conducted with three participants in each round. Data was collected via surveys and during the walkthrough sessions. Revisions were made based on feedback received from participants to improve the overall site and user experience. Based on the data, minor revisions were made to the site. The methods, participant data, design implications, and website modifications will be further discussed in this paper.

Statement of the Problem

Communication between families and teacher is an essential part of creating a positive learning environment. For some kindergarten students, the start of kindergarten is their first experience in school. They are learning routines and how to behave. Communication with families is especially critical at this time so parents are aware of what is happening and how their child is transitioning into school.

Technology also plays a vital role in today's society. It is hard to go anywhere without some sort of access to technology. Using technology as a way to communicate with parents encourages families to take an active role in their child's education in a way that is relatively convenient to most. The classroom website will keep parents well-informed and educated about how their child is progressing as well as their overall educational journey.

Currently, there is a school website with areas for teachers to post about their classroom, but it has limited features and design capabilities. It can also be difficult for parents to navigate through the site to find the area specifically for their child's classroom. Many teachers use other websites to communicate with parents because they have found it more efficient than the school website. These other sites allowed for easier communication with parents with features such as messaging. Communication was much quicker and efficient than communicating through email. The updated classroom website will create a more efficient way of communicating and sharing information with parents. A classroom website would be an ideal resource for teachers to have all school and classroom information in one place for parents to access. The classroom website would also allow parents access to important information at their convenience while also ensuring that important notices are not lost.

The purpose of this usability study was to evaluate the ease-of-use and the navigation of the classroom website for parents of kindergarten students at a public school on O'ahu. The website aimed to improve and increase the effectiveness of communicating and sharing information with parents. The classroom website's goal was to allow parents and the teacher to communicate more efficiently than with current methods as well as distribute information to parents more effectively.

Literature Review

A study showed the percentage of parent participation decreases as students get older and that kindergarten through second grade has a higher percentage of parent participation (McQuiggan & Megra, 2017). A classroom website would foster the relationship with kindergarten through second grade parents already involved in their child's education, but a classroom website could offer an opportunity to encourage parent involvement in upper grades. The technology of a website would offer convenience for parents to access information at a time that works for them and could also encourage more parent involvement.

It is important for many parents to be involved in their child's education. Parents want to know what their child is learning, the activities their child is participating in, and the progress their child is making. Classroom websites connect parents to the classroom (Cooper, 2014). A classroom website would give parents access to information they may be wanting to seek out and all that information would be provided for them all in one online space.

There have been a few usability studies that have showed classroom websites to be effective and efficient (Neizman, 2016). Teacher websites are used to convey important information to parents. When used effectively, teacher websites can provide parents with information such as school or classroom announcements, updates, or information on events. Some usability studies offered information parents were looking for in one convenient location (Kotomori, 2014).

Teacher websites can also keep parents informed and up-to-date on what is happening with their child in the classroom. Parents can get important information about the school

and the classroom while also seeing their child's growth and experiences. Websites that are easy to navigate allow the user to find the information they are looking for easily and efficiently. Such usability studies tested the ease-of-use as well as the effectiveness of it's ability to deliver important information to parents (Kanetani, 2019). Announcements, updates, and their child's growth and experiences are a few things parents use teacher websites for. So it's important to create teacher websites that are easy to navigate and allow parents to find all the information they are looking for. Throughout the usability study, participants were able to test out the website to see how easily they were able to navigate the site and find specific things within the site (Yoshizawa, 2014).

Methodology

Research Questions/Goals. The goal of this usability study was to see how participants were able to navigate and locate information found within the website. During the study, participants were asked questions based on scenarios. These questions were derived from the following research questions:

1. How easy or difficult is it for parents to find the teacher's information?
2. How easy or difficult is it for parents to find school and classroom information?

Content Analysis. The classroom website consisted of some existing components of the current teacher page, but also incorporated new ideas for more effective communication between the teacher and parents. The website included pages for parents to have access to photos, teacher contact info, and school and classroom announcements. They also had access to a classroom calendar with school and grade-level specific events noted, the school lunch menu, and information on upcoming events. This information allowed parents to be well-informed and up-to-date with school and classroom information. A wireframe of the website was created using NinjaMock (see Appendix A).

Participants. The target audience for this study were parents of current or previous kindergarten students at a public school on O‘ahu. There were a total of 9 adults, 6 females and 3 males, who participated in this study (Table 1). All the participants were over the age of 18 with the largest participant group being 6 (66.7%) in the age group 30-39. Participants included parents of current or previous kindergarten students. Additional participant demographics included identifying whether or not they were a part of a current or previous student, if the participant has had any other children attend kindergarten at the school, computer proficiency, internet confidence, internet access type, and internet activity (see Appendix G). Participants were asked if they were a parent of a current or previous kindergarten student and if they had any other children attend kindergarten at the school to determine their familiarity with kindergarten and school information.

Participants were recruited in-person, by phone, or by email with a Participant Recruitment Letter (see Appendix B). The Participant Recruitment Letter provided participants with the purpose of the study, what was required of them during the study if they chose to participate, how the data will be used, and any necessary consent forms (see Appendix C). Prior to the start of the walkthrough, participants agreed and signed the consent form and completed a pre-survey (see Appendix E) to collect basic demographic information.

Based on interest, I sent an email to prospective participants to request a date and time to test the site as well as their preferred delivery method, either face-to-face or remote. Lastly, once the study was completed, a follow-up email was sent to participants thanking them for their participation and a request to complete a post-survey (see Appendix F) in Google Forms.

Table 1.

Participant Gender and Age

Characteristic	Number	Percent
Gender		
Male	3	33.3%
Female	**6**	**66.7%**
Age		
18-29	2	22.2%
30-39	**6**	**66.7%**
40-49	1	11.1%
50 and above	0	0%

Evaluation Instruments. The instruments I used in my usability study included a cognitive walkthrough to be recorded on a screencast where participants will be asked to complete tasks, and pre and post surveys delivered on Google Forms.

The cognitive walkthrough used a usability protocol (see Appendix D), which included a script and tasks for the participant to complete. A screencast was taken throughout the entire cognitive walkthrough to record both video and audio of the participant completing the tasks provided and to record their thinking. The recording allowed me to review the participant's thinking and revisit the participant's feedback. Within the usability protocol, the script introduced myself, the purpose of the project, and the feedback was used to help improve the site for future users. Post questions was used to gain valuable feedback that helped with developing and creating the final site for my project.

The pre-survey collected background and demographic information from participants and their interest in the project. The post-survey was another way for participants to provide feedback about the project and their overall experience with it.

All the data collected was used to improve my project. After my cognitive walkthroughs were complete, the data was reviewed and was displayed through a rating scale of errors. Data was collected and rated using Nielson's Scale of Severity with a rating scale of 0-4

where 0 is minor visual errors and 4 is severe errors that may prove catastrophic if the website goes live (Nielsen, 1994).

Project Design. My web design principles were taken from Gestalt's Principles as well as from the article "Website design: Viewing the web as a cognitive landscape" by Deborah E. Rosena and Elizabeth Purinton.

Gestalt's Principles helped me focus on the overall aesthetics of my site such as grouping similar information together within the site and keeping the design of buttons, links and images consistent throughout the site (Todorovic, 2008). I kept Gestalt's Principles in mind when I developed the site to ensure the site was visually pleasing to the user using proximity methods and design techniques. The principles used in the overall design of my website ensured that objects were easily identified from the background (Graham, 2008) and ultimately that the website had consistency and simplicity throughout so that information could be found efficiently.

Rosena's and Purinton's (2004) article helped me focus on the cognitive parts of designing the website and assist me in planning the website to better ensure repeated visits from the user. The article helped me use the cognitive walkthroughs and questioning to gain insight on changes needed to make the overall website pleasing and inviting to look at so users wanted to browse the content within the site.

Both the article and Gestalt's Principles were used to create a site that users would enjoy looking at and browsing. The design of the aesthetics and cognitive parts within the site were planned with the intent of the users revisiting the site to browse through the content provided.

The wireframe was created using NinjaMock, which is a free program that allows users to create wireframes mimicking the flow of a website by linking to other pages that a user would see.

The website was created using Weebly where users can design a website and publish the site for free.

Procedures. Prior to recruiting participants and beginning the usability study, the researcher completed the CITI Program courses and submit all required information and documentation to the University of Hawai'i Institutional Review Board (IRB) eProtocol. Once IRB approval was given, recruiting and testing began. There were three rounds of testing with three participants in each round conducted using Krugs (2005) usability protocol script. Participants were given a consent form and were asked to complete a pre-survey to gather basic demographic information before testing begins. Once consent is given, the participant received a brief introduction of the purpose of the usability study and information on general testing procedures.

Testing was conducted face-to-face unless the participant requested testing to be done remotely. During the cognitive walkthroughs, participants would be encouraged to think aloud and verbally explain their thinking while they are moving through each task. Once

the testing was complete, participants were asked a few questions to gather qualitative data. A post-survey was emailed to participants following each session to gather responses on the user's experience of the design layout, navigation, ease-of-use, effectiveness, and participation.

After the cognitive walkthroughs were complete, the researcher analyzed the data including the observational notes and screen recordings to determine if improvements to the website were needed. Based on user feedback and severity ratings, revisions to the website were made after each round of testing. All the data gathered was used solely for this usability study and stored on a password protected computer. All video and audio recordings were destroyed once the research and data analysis were complete.

Analysis and Results

Data collected from participants were both qualitative and quantitative. Quantitative data was collected from three of rounds of usability sessions with three participants in each session. The data was analyzed using Nielsen's Severity rating scale, 0-4, where tasks are rated by severity. 0 indicated there's no usability problem, 1 indicated cosmetic problem only and it need not be fixed unless extra time is available, 2 indicated minor usability problem and fixing this should be given low priority, 3 indicated major usability problem and it is important to fix so it should be given high priority and 4 indicated that it was a usability catastrophe and it was imperative to fix this before product can be released. As recommended by Sauro (2011), to deliver the results, an average task completion time was used to assist in identifying the slowest and fastest task time to determine the minimum and range in seconds. A severity rating of 0 was given if a user took 0-10 seconds to complete the task. 11-20 seconds to complete a task was given a severity rating of 1. A severity rating of 2 was given if a user took 21-30 seconds. A severity rating of 3 was given if it took a user 31-40 seconds. Over 41 seconds received a severity rating of 4. How long a participant took to complete a task determined the severity rating score.

Round 1 Results. Figure 1 below shows the results from Round 1 of testing with participants 1, 2, and 3. The data shows how long (in seconds) it took each participant to complete each task within the testing session. For Task 1, only Participant 1 had a severity rating score of 1 taking 13 seconds to complete the task while Participants 1 and 2 both received a severity rating score of 0 with 6 seconds to complete the task. The designer noticed that Participant 1 clicked on a bookmarked tab on the internet browser and did not stay within the website. Due to this, the designer chose not to make any adjustments to the website design. For Task 4, Participant 1 had a severity rating of 2 and participant 2 had a severity rating score of 1 with Participant 1 taking 21 seconds to complete the task and Participant 2 taking 18 seconds to complete the task. Both received this rating score because they clicked on the "Classroom Information" tab rather than the "Home" tab where the pictures were located. Due to the severity of the ratings and more than one participant encountering this issue, the designer chose to move the pictures from the "Home" page to the "Classroom Information" page to keep the classroom photos categorized with the other classroom information. Task 2 and 3 had a rating of zero for all participants so no changes were made based on this data.

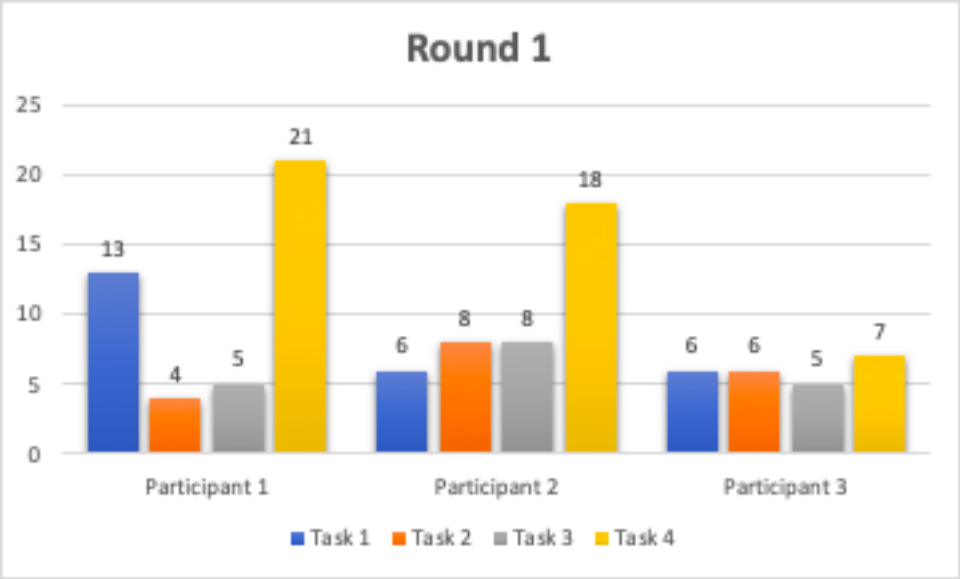

Figure 1. The graph shows how long it took round 1 participants to complete the tasks.

Round 1 User Experience. After the first round of testing, participants responses were analyzed and an average score was provided for each question was provided in Table 2. An average score for each section was also provided. The highest section after Round 1 was "Ease-of-Use" with a Section Average of 5 out of 5 and the lowest section was "Participation" with a Section average of 4.67 out of 5. Participants were able to ask if they had any questions throughout the walkthrough so the designer decided no changes to the script were necessary at this time. The question with the lowest rating was a 4.33 out of 5 for the website's visual appeal. Since that was the lowest, the designer decided to focus on making the website more visually appealing before Round 2 of testing.

Table 2.

Post-Survey User Experience: Round 1

	Characteristics	**Average (Avg.)**	**Round 1 Section Average (Sec. Avg.)**
Design Layout	Website is visually appealing	4.33	4.75
	Text is clearly written	5	
	Media (i.e. images, videos) are interesting and relatable to topic	4.67	
	Organization of information is clear	5	

Navigation	Main navigation is easily identifiable	4.67	4.75
	Toolbar labels are clear and concise	5	
	Number of buttons/links are reasonable	4.67	
	Links are consistent and easily identifiable	4.67	
Ease-of-Use	Website is user-friendly	5	5
	Website has a clean and simple presentation	5	
Effectiveness	Information on the website was useful	5	4.92
	Information was easy to find on the website	5	
	I felt comfortable navigating the website	4.67	
	The website provided useful school and classroom information	5	
Participation	Instructions and guidelines for participating in the usability testing were clear	4.67	4.67
1= Strongly Disagree, 2= Somewhat Disagree, 3= Somewhat Agree, 4= Agree, 5= Strongly Agree			

Round 2 Results. Figure 2 below shows the results from Round 2 of testing with participants 4, 5, and 6. It shows how long (in seconds) it took each participant to complete each task within the testing session. All participants for tasks 1, 2, and 3 had severity rating scores of 0. For Task 4, Participant 5 had a severity rating score of 0, but took slightly longer to complete the task than the other participants. The designer observed that although the amount of time it took Participant 5 to complete the task was higher, it was due to the participant describing their thinking, but no navigational issues were observed. Therefore, no changes were made to the site.

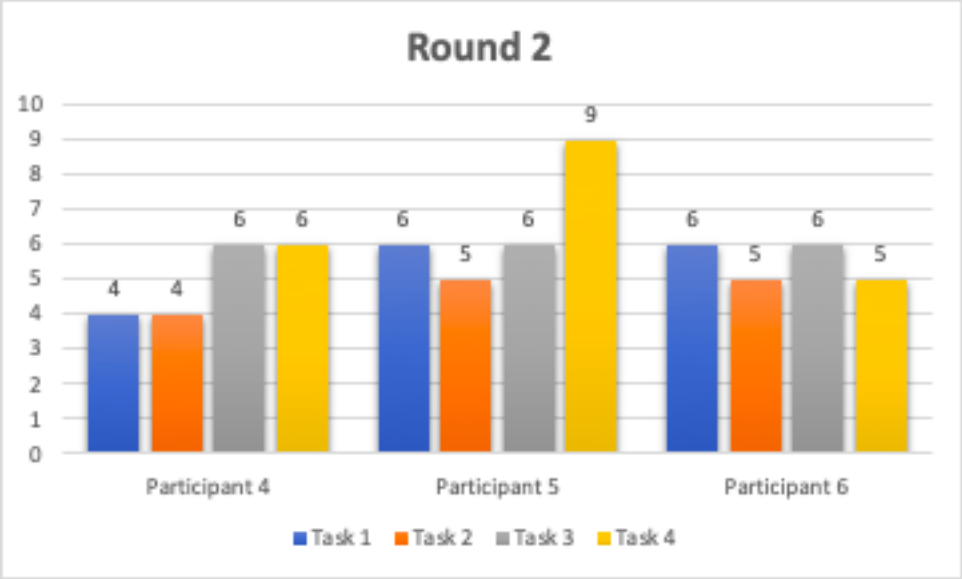

Figure 2. The graph shows how long it took round 2 participants to complete the tasks.

Round 2 User Experience. In Table 3, it shows all participants rated a 5 for all categories, which shows an improvement for Design Layout, Navigation, Effectiveness, and Participation. Ease-of-Use stayed the same since it rated a 5 in Round 1. Since all participants rated each category a 5, no changes were made to the site.

Table 3.

Post-Survey User Experience: Round 2

	Characteristics	**Avg.**	**Round 2 Sec. Avg.**	**Round 1 Sec. Avg.**
Design Layout	Website is visually appealing	5	5	4.75
	Text is clearly written	5		
	Media (i.e. images, videos) are interesting and relatable to topic	5		
	Organization of information is clear	5		
Navigation	Main navigation is easily identifiable	5	5	4.75
	Toolbar labels are clear and concise	5		
	Number of buttons/links are reasonable	5		
	Links are consistent and easily identifiable	5		

Ease-of-Use	Website is user-friendly	5	5	5
	Website has a clean and simple presentation	5		
Effectiveness	Information on the website was useful	5	5	4.92
	Information was easy to find on the website	5		
	I felt comfortable navigating the website	5		
	The website provided useful school and classroom information	5		
Participation	Instructions and guidelines for participating in the usability testing were clear	5	5	4.67
1= Strongly Disagree, 2= Somewhat Disagree, 3= Somewhat Agree, 4= Agree, 5= Strongly Agree				

Round 3 Results. In Figure 3, the results from Round 3 of testing with participants 7, 8, and 9 shows how long (in seconds) it took each participant to complete each task within the testing session. All severity ratings for each participant completing each task was 0. Based on the data, no severe issues occurred during this testing round so no changes were made.

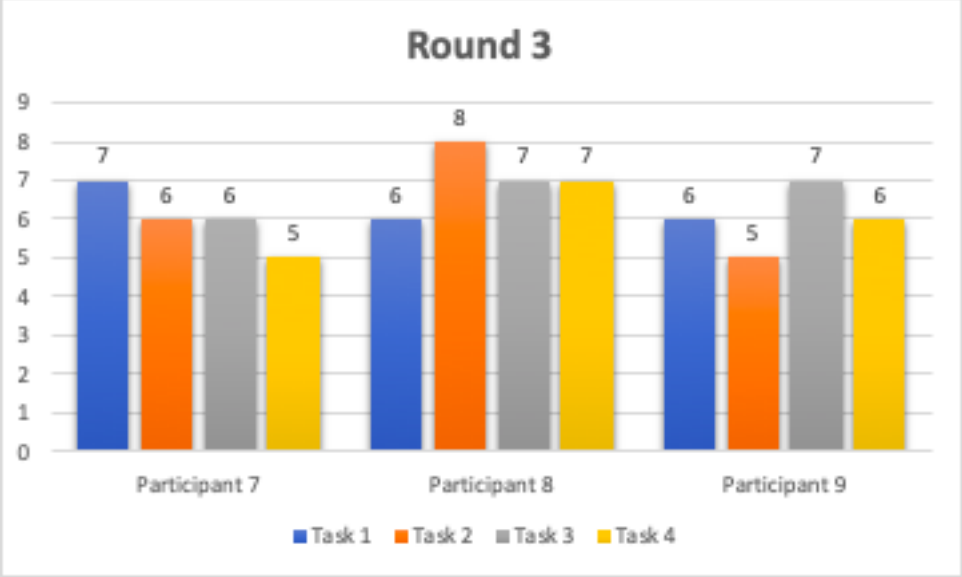

Figure 3. The graph shows how long it took round 3 participants to complete the tasks.

Round 3 User Experience. Table 4 shows all participants rated a 5 in each category. No changes were made to the site.

Table 4.

Post-Survey User Experience: Round 3

	Characteristics	Avg.	Round 3 Sec. Avg.	Round 2 Sec. Avg.	Round 1 Sec. Avg.
Design Lay-out	Website is visually appealing	5	5	5	4.75
	Text is clearly written	5			
	Media (i.e. images, videos) are interesting and relatable to topic	5			
	Organization of information is clear	5			
Navigation	Main navigation is easily identifiable	5	5	5	4.75
	Toolbar labels are clear and concise	5			
	Number of buttons/links are reasonable	5			
	Links are consistent and easily identifiable	5			
Ease-of-Use	Website is user-friendly	5	5	5	5
	Website has a clean and simple presentation	5			
Effectiveness	Information on the website was useful	5	5	5	4.92
	Information was easy to find on the website	5			
	I felt comfortable navigating the website	5			

	The website provided useful school and classroom information	5			
Participation	Instructions and guidelines for participating in the usability testing were clear	5	5	5	4.67
1= Strongly Disagree, 2= Somewhat Disagree, 3= Somewhat Agree, 4= Agree, 5= Strongly Agree					

Discussion

The participants gave me feedback and data related to the usability and navigation of the site. Since there was more than one testing round and revisions were made after each testing round, less feedback was received requiring changes to the website as the study moved along. Some verbal feedback was received during the testing sessions and the designer decided to implement those changes. The curriculum that was used at the school was incorporated into the "School Information" page and the iReady link was made clickable for parent convenience since students have to login to that site to complete lessons. Making the teachers email and school phone number clickable was also implemented for parent convenience.

My two research questions were how easy or difficult was it for the parents to find the teacher's information and school and classroom information. Overall, parents found it easy in response to both research questions. The website was designed to have all necessary information in one place for parents to access and feedback showed that it is easy to find all information. A majority of the verbal feedback and feedback from the post-survey showed that the site gave parents a simple and easy way to find information they needed.

Conclusion

Technology allows quick access to information and that can make accessing information convenient for busy parents. The teacher website that was created had all necessary information for parents in one place. Aparicio and Costa's (2008) article explains the importance of keeping a website design simple so the user sees the important information in the website. Since parents are busy, the website design was simple so they could find the information they needed quickly and efficiently. Another goal of the design was to be aesthetically pleasing so parents would continue to use the site and revisit it to access school and classroom information. The goal of the usability study was to create a website that could be easily navigated for parents to be able to find all the information they needed.

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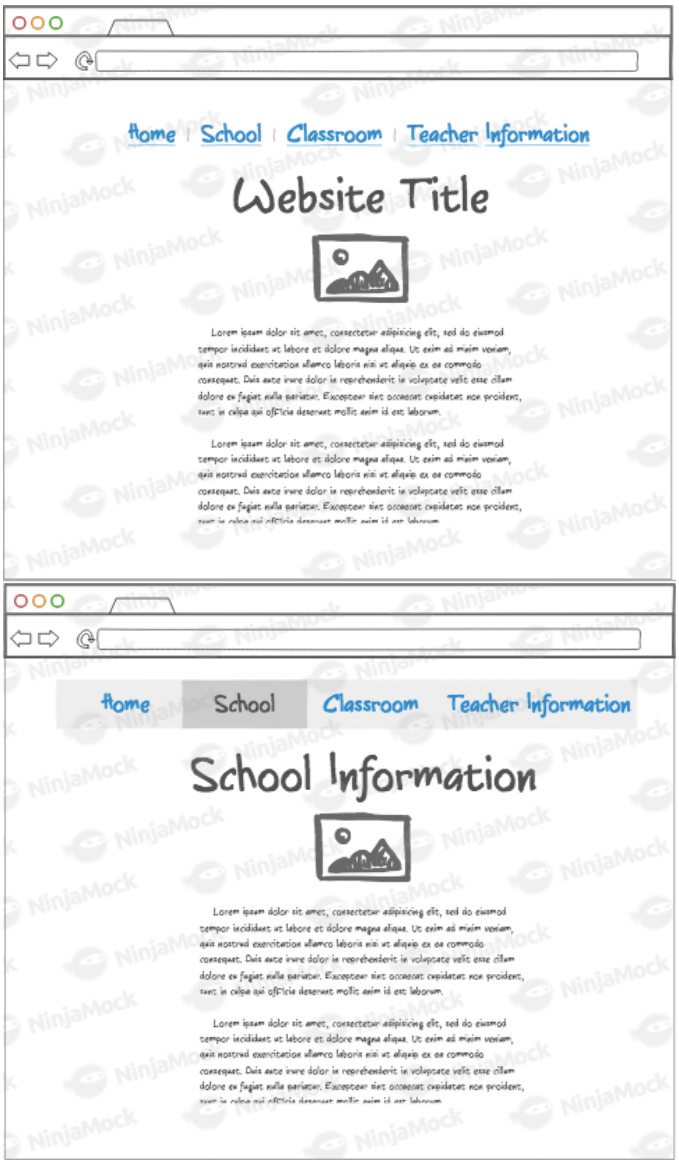
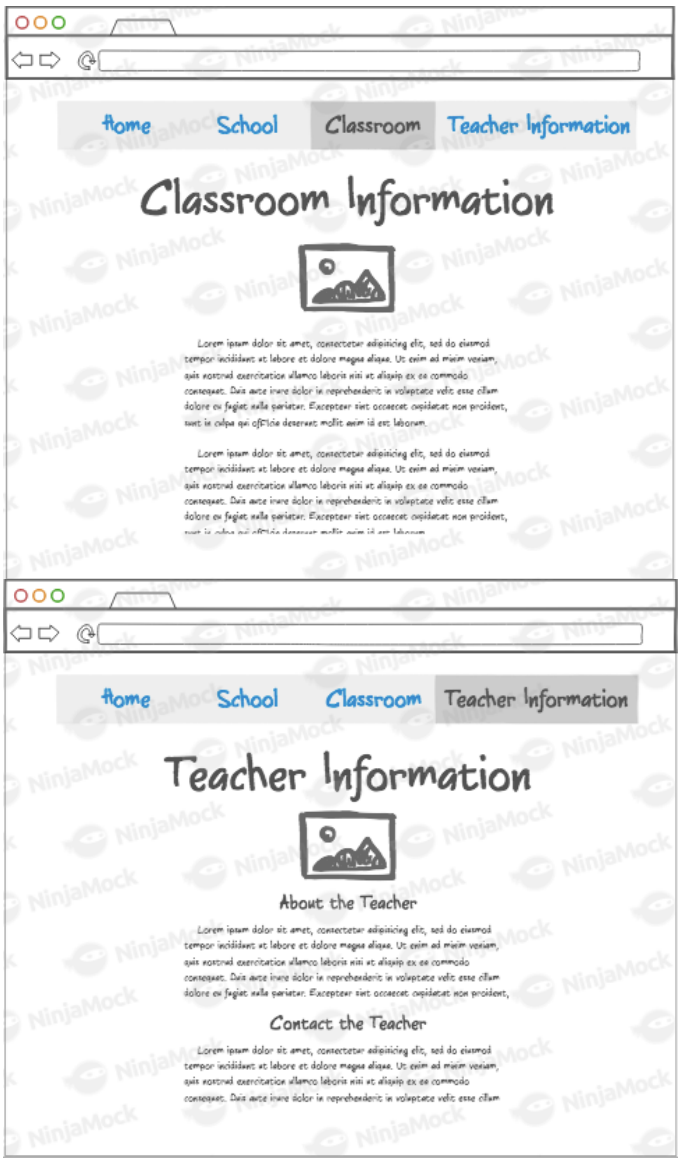
APPENDICES

Appendix A

Wireframe

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Appendix B

Participant Recruitment Letter

Dear Parents and Guardians,

My name is Morisha Ogata and I am one of the kindergarten teachers. I am currently a graduate student at the University of Hawai‘i at Mānoa in the Learning Design and Technology program. I am conducting a usability study on my teacher-created classroom website.

The purpose of my research project is to test the navigation and ease-of-use of my teacher-created classroom website for parents of my kindergarten students. The website would provide information to parents about school and classroom information such as event information, grade-level events, or classroom announcements. It would also provide a way for parents to communicate with the teacher.

I need to gather volunteers who are willing to test my classroom website. Participants would be asked to complete some short tasks, which would test the website's navigation, the ease-of-use of the website and the participant's experience. The session will take about 30-45 minutes to complete.

As a parent of a current or previous student in my class, I would like to ask if you would like to participate in the study. Depending on your preference, the testing session can be done face-to-face or remotely. The information from this study will be kept confidential and you may opt-out at any time.

If you are interested in participating in this study or have questions, feel free to contact me at morisha@hawaii.edu

Thank you,
Morisha Ogata

Appendix C
Consent Form

Aloha! My name is Morisha Ogata and I am a graduate student at the University of Hawai‘i (UH) at Mānoa in the College of Education, Learning Design and Technology (LTEC) program. I am doing a research project as part of the requirements for earning my graduate degree.

The purpose of my project is to evaluate a teacher-created classroom website containing information and resources to keep parents of students in Ms. Ogata’s kindergarten class up-to-date with school and classroom information and announcements.

Participation will be in person using a screencast or remotely through Zoom. If you opt to participate in person, a computer will be provided for your use. Online participation requires a computer, internet connection, audio and video capability. If you participate, you will be asked to navigate through the resource website while being prompted by a series of scenario questions and tasks. The questions are intended to evaluate the ease of use and user satisfaction of the website. You will be encouraged to share your thoughts out loud as you navigate the website, which will assist me in gaining further insights into the user experience. Your actions and verbal comments will be screen captured and recorded using a screencastify or Zoom.

Once all scenarios are completed, you may be asked follow up questions as needed. You will be asked to complete a post survey intended to gather feedback pertaining to the design layout, navigation, ease of use and effectiveness of the website as a whole. The entire usability study, including surveys, will last about 30-45 minutes.

Your participation in this project is completely voluntary. You may stop participating at any time. If you stop being in the study, there will be no penalty or loss to you. Your choice to participate or not participate will not affect your rights to services at the University of Hawai‘i at Mānoa.

The data taken from your participation will be used solely for the purpose of this usability study. I will keep all study data secured on a password protected computer. Only my University of Hawai'i advisor and I will have access to the information.

Once the research is complete, all recordings will be destroyed. Research completion date is set for May 1, 2020. When I report the results of my research project, I will not use your name. I will not use any other personal identifying information that can identify you. I will report my findings in a way that protects your privacy and confidentiality to the extent allowed by law.

If you have any questions about this study, please call or email me at morisha@hawaii.edu. You may also contact my professor, Dr. Curtis Ho at curtis@hawaii.edu or 808.956.7771. You may contact the UH Human Studies Program at 808.956.5007 or uhirb@hawaii.edu. to discuss problems, concerns and questions; obtain information; or

offer input with an informed individual who is unaffiliated with the specific research protocol. Please visit http://go.hawaii.edu/jRd for more information on your rights as a research participant.

Permission to Participate in *Usability of a Teacher Resource Website*

"I certify that I have read and that I understand the information in this consent form that I have been given satisfactory answers to my questions concerning the project and that I have been told that I am free to withdraw my consent and to discontinue participation in the project at any time without any negative consequences to me.

I herewith give my consent to participate in this research project with the understanding that such consent does not waive any of my legal rights."

With your permission, I will audio-record the scenario portion of this study so that I can later transcribe and analyze the verbal responses. If you opt to participant remotely, I will also video-record during the scenario portion of this study so that I can analyze the reaction movements.

Please initial next to either "Yes" or "No" to the following:
I consent to be audio recorded during the scenario portion of this research.

_____ Yes _____ No

I consent to be video recorded during the scenario portion of this research.

_____ Yes _____ No

_____ _____
Printed Name of Participant Signature of Participant

_____
Date

_____ _____
Signature of the Person Obtaining Consent Date

Appendix D
Usability Protocol

Usability Protocol
Teacher Website
Morisha Ogata

Modified from Usability Script- Rocket Surgery Made Easy © 2010 Steve Krug

Technology Set-Up Checklist (Facilitator Computer)

1. Facilitator should set up his/her computer and attach all ords/peripherals - make sure to use a wired mouse
2. Plug in to a power outlet (don't trust the battery)
3. Make sure the computer is connected to the Internet
4. Check audio and video settings before starting the usability test
    a. Ensure the microphone is working
    b. Ensure the volume is at a reasonable level
5. Log into Zoom account and start a "New Meeting"
6. Email participant Zoom meeting link prior, link to the website (if testing not in person)
7. Contact the participant to see if they are ready to log on

Technology Set-Up Checklist (Participant Computer)

8. Participant sets up computer and attach all cords/peripherals - make sure to use a wired mouse
9. Plug in to a power outlet (don't trust the battery)
10. Make sure the computer is connected to the Internet
11. Click on the **Zoom** meeting link
12. Check audio and video settings before starting the usability test
    a. Ensure the microphone is working
    b. Ensure the volume is at a reasonable level
    c. Make sure the participant is able to share their screen correctly
13. Have participant download website link
14. After app download, click on the website link
15. Walk participant through recording their screen on their phone (iPhone instructions) and make sure the microphone is ON when recording!
16. Have participant put their phone on DO NOT DISTURB.

After Participant computer is set up:

17. Explain your study to participant and that the usability test will be recorded. Ensure that they understand all directions.
18. When the participant has completed their tasks, facilitator will tell the participant to click the "Stop Share" button located at the top of the window.
19. Thank them for their participation and ask if they have any further questions.
20. When you feel that the conversation is complete, you may click on the red text labeled "End Meeting." Again, your study will be saved automatically to your computer.

Facilitator Script

❑ ***Alert the participant when the meeting session starts and that the Zoom meeting is now being recorded.***

" Hi, [insert participant's name]. My name is [insert facilitator's name], and I'm going to be walking you through this session today.

Before we begin, I have some information for you, and I'm going to read it to make sure that I cover everything.

I'm asking people try out my app designed for my LTEC Master's Project. I would like to see if it works as intended. The session should take about 15 minutes.

The first thing I want to make clear right away is that I'm testing the *app paper prototype*, not you. You can't do anything wrong here. In fact, this is probably the one place today where you don't have to worry about making mistakes.

As you use the app, I'm going to ask you as much as possible to try to think out loud: to say what you're looking at, what you're trying to do, and what you're thinking. This will

be a big help to us.

Also, please don't worry that you're going to hurt our feelings. I'm doing this to improve the app, so I need to hear your honest reactions.

If you have any questions as we go along, just ask them. I may not be able to answer them right away, since I'm interested in how people do when they don't have someone who can help. But if you still have any questions when we're done I'll try to answer them then.

And if you need to take a break at any point, just let me know. Do you have any questions so far?"

- ❑ ***Ask participant a few preliminary questions:***

"OK. Before we look at the app, I'd like to ask you just a few quick questions.

1. What is your overall experience with teacher or school websites?
2. How often would you say you use networking or social media apps on your phone?
3. How often do you use websites to search for specific information?

OK, great. We're done with the questions, and we can start testing out the paper prototype for our app."

- ❑ ***Ask participant to open website app by opening the project and start screen record:***

"Please use your phone and click on the link I provided to open the project. You may begin recording your screen."

- ❑ ***Ask the participant to use the website app and swipe through the screens (DO NOT START PREVIEW YET) and narrate about the overall appearance of the app.***

"Please flip through as many screens as you can and in 60 seconds, describe the overall appearance of the paper prototype."

- ❑ ***Ask the participant to complete a few specific tasks.***

"Thanks for doing that. You did a great job. Now I'm going to ask you to try doing some specific tasks. I'm going to read each one out loud but each will be provided to you via the Zoom chatbox.

I'm also going to ask you to do these tasks without using any search features. We'll learn a lot more about how well the app works that way. And again, as much as possible, it will help us if you can try to think out loud as you go along.

You will have to exit and restart the website app by tapping the screen with three fingers and press start preview (To find the hyperlinks on the screens, you will have to tap on a blank part of the screen)."

Allow the user to proceed from one task to the next until you don't feel like it's producing any value or the user becomes very frustrated. Repeat for each task or until time runs out.

Scenarios for Usability Study

Scenario 1

Your child has mentioned upcoming holiday events and you want to be prepared. You want to look for the class calendar for important dates and announcements. Where would you find the class calendar with this information? Walk me through how you would find the class calendar.

1. Explain how you got to this page.
2. Explain what you are seeing on this page.
3. What do you think you are supposed to do with this information?

Scenario 2

Your child has dietary restrictions and you want to check the school menu to know what days you need to pack home lunch for your child. Where would you go to find the lunch menu? Walk me through how you would find the lunch menu.

1. Explain how you got to this page.
2. Explain what you are seeing on this page.
3. What do you think you are supposed to do with this information?

Scenario 3

Your child's birthday is coming up and you would like to contact the teacher about bringing in cupcakes for the class. Where would you click to find the teacher's contact information? Walk me through how you would do this.

1. Explain how you got to this page.
2. Explain what you are seeing on this page.
3. What do you think you are supposed to do with this information?

Scenario 4

Your child came home and told you that the teacher shared some photos on the class website. Where would you find the photos on the class website? Walk me through how you would find this information.

4. Explain how you got to this page.
5. Explain what you are seeing on this page.
6. What do you think you are supposed to do with this information?

"Thanks, that was very helpful.

❑ ***(If time permits) ask the observers' questions.***

We are done with the main questions, but I have a few more general questions to ask you.

1. On a scale of 1 to 5, with 1 representing very difficult and 5 representing very easy, how would you rate your experience during today's testing and why would you give it that rating?
2. After participating in this study, would you recommend this app to any friends or family? Why?

That's the last question, "Do you have any questions for me, now that we're done?"

I want to thank you for your time and willingness to be a participant in this study."

❑ ***Request from the participant that they end their screenshare***

"Go ahead and stop sharing your screen by clicking on the red "Stop Share" button."

❑ ***When you feel that the conversation is complete, you may say goodbye and click the "End Meeting" button. The recording will be saved automatically to your computer.***

After the Session:

1. Find the video file on your computer in the "Documents" section. There will be a folder labeled Zoom. Inside the folder will be a file labeled with the date of your recording.
2. Review your video.
3. Share recording with your group. Upload the file to your Google Team Drive. Click on the "add" button while in the team folder, scroll down and select "File Upload." Navigate to your file and upload.
4. Have the participant send you the phone screen recording.

Appendix E

Pre-survey

The purpose of this pre-survey is to gather some data of the participants participating in the usability study of the teacher-created classroom website for parents of kindergarten students.

This survey has ten questions and will take approximately five minutes to complete. In order to protect your confidentiality, there will be no questions or information that will personally identify you. The results of this survey will be a part of my final research project in the Learning Design and Technology program at the University of Hawai‘i at Mānoa.

Thank you for participating!

1. I identify as
   a. Male
   b. Female
   c. Rather not say or Other
2. Age
   a. 18-29
   b. 30-39
   c. 40-49
   d. 50 and above
3. Are you a parent of a _____ kindergarten student?
   a. Current
   b. Previous
4. Have you had any other children attend kindergarten at our school?
   a. Yes
   b. No
5. How often do you use the internet?
   a. Daily
   b. Weekly
   c. Monthly
   d. Occasionally
   e. Never
6. How often do you use the internet daily?
   a. Less than 3 hours
   b. 3-6 hours
   c. 6-9 hours
   d. Over 9 hours
   e. I do not use the internet
7. How would you rate your proficiency using computers?
   a. Novice
   b. Advanced beginner
   c. Competent
   d. Proficient

Appendix F
Post-survey

Thank you for your participation in the usability study. Please complete this post survey. Your participation is voluntary.

The purpose of this post survey is to further measure your experience and provide insight about what worked well and what improvements should be made.

This survey has 16 questions and will take approximately ten minutes to complete. In order to protect your confidentiality, there will be no questions or information that will personally identify you. The results of this survey will be a part of my final research project in the Learning Design and Technology program at the University of Hawai‘i at Mānoa.

Thank you again for your participation!

1-Strongly Disagree 2-Somewhat Disagree 3-Somewhat Agree 4- Agree 5-Strongly Agree

Design Layout

1) Website is visually appealing
2) Text is clearly written
3) Media (i.e. images, videos) are interesting and relatable to topic
4) Organization of information is clear

Navigation

1) Main navigation is easily identifiable
2) Toolbar labels are clear and concise
3) Number of buttons/links are reasonable
4) Links are consistent and easily identifiable

Ease of Use

1) Website is user-friendly
2) Website has a clean and simple presentation

Effectiveness

1) Information on the website was useful
2) Information was easy to find on the website
3) I felt comfortable navigating the website
4) The website provided useful school and classroom inforamation

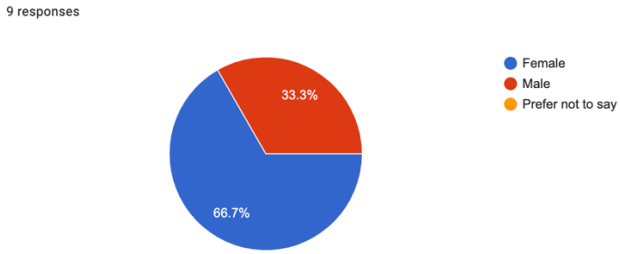
Participation

1) Instructions and guidelines for participating in the usability testing were clear

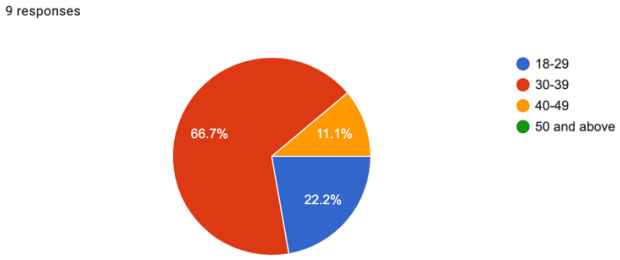
Appendix G

Pre-survey Data

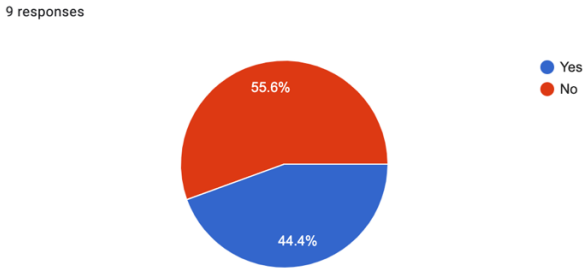
Gender



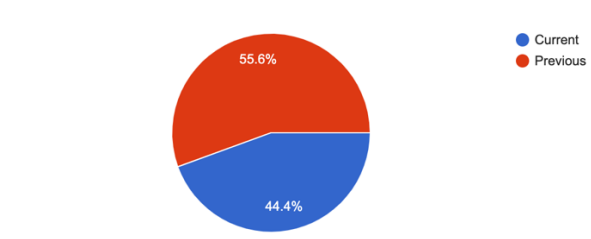
Age



Have you ever had any other children attend kindergarten at our school?

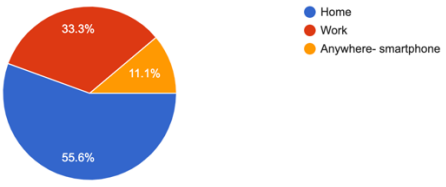


Are you a parent of a _____ kindergarten student?



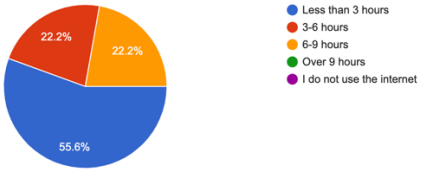
Where do you usually access the internet?

9 responses



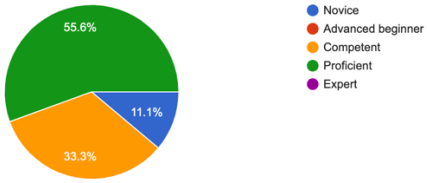
How often do you use the internet daily?

9 responses



How would you rate your level of confidence using the internet?

9 responses



How would you rate your proficiency using computers?

9 responses